African Penguin

Relay/Roleplay Game

KNOWLEDGE

- Predator-prey relationships on both the beach and in the ocean
- How humans can affect penguin populations through overfishing
- Demonstrate how penguins have limited mobility on land compared to the ocean
- Demonstrate how overfishing negatively affects penguins

ACTIVE

- Players will have to work through a relay race, mimicking penguins on land.
- Players will have to avoid predators while catching food in the ocean.

TIME	GROUP SIZE	LOCATION	GRADE LEVEL	EQUIPMENT
As long or short as you'd like.	**10+**	**Classroom**	**Any**	Chairs Tables Stools Skipping Ropes Bean Bags Hula hoops Balls

DEBRIEF/REFLECTIVE COMPONENT

- How do the challenges that penguins face differ when they are on the beach compared to in the ocean? Why?
- Are penguins more susceptible to attack in the ocean or on land?
- What happens to the penguins when more fish are removed from the ocean?
- How can humans help the penguins?

HELPFUL TIPS

- To make waddling fair for each player they must keep their arms at their sides and knees glued together while on the beach.
- Predators on land include mongooses, cats, genets, kelp gulls. Ocean predators consist of sharks, cape fur seals, and orcas.

OCEAN LITERACY PRINCIPLES

5. The ocean supports a great diversity of life and ecosystems.

   a. Ocean life ranges in size from the smallest living things, microbes, to the largest animal on Earth, blue whales.

   b. Most of the organisms and biomass in the ocean are microbes, which are the basis of all ocean food webs. Microbes are the most important primary producers in the ocean. They have extremely fast growth rates and life cycles, and produce a huge amount of the carbon and oxygen on Earth.

   c. Most of the major groups that exist on Earth are found exclusively in the ocean and the diversity of major groups of organisms is much greater in the ocean than on land

   d. Ocean biology provides many unique examples of life cycles, adaptations, and important relationships among organisms (symbiosis, predator – prey dynamics, and energy transfer) that do not occur on land.

   e. The ocean provides a vast living space with diverse and unique ecosystems from the surface through the water column and down to, and below, the seafloor. Most of the living space on Earth is in the ocean.

   f. Ocean ecosystems are defined by environmental factors and the community of organisms living there. Ocean life is not evenly distributed through time or space due to differences in abiotic factors such as oxygen, salinity, temperature, pH, light, nutrients, pressure, substrate, and circulation. A few regions of the ocean support the most abundant life on Earth, while most of the ocean does not support much life.

6. The ocean and humans are inextricably interconnected.

   b. The ocean provides food, medicines, and mineral and energy resources. It supports jobs and national economies, serves as a highway for transportation of goods and people, and plays a role in national security.

   d. Humans affect the ocean in a variety of ways. Laws, regulations, and resource management affect what is taken out and put into the ocean. Human development and activity leads to pollution (point source, non-point source, and noise pollution), changes to ocean chemistry (ocean acidification) and physical modifications (changes to beaches, shores, and rivers). In addition, humans have removed most of the large vertebrates from the ocean.

   g. Everyone is responsible for caring for the ocean. The ocean sustains life on Earth and humans must live in ways that sustain the ocean. Individual and collective actions are needed to effectively manage ocean resources for all.

Set Up

1. In colonies (groups) of six to eight players, one player (per group) at a time will navigate their way through the relay/obstacle course, catch a fish (bean bag), and navigate back through the course to their colonies.

2. The relay/obstacle course will consist of two areas: a beach with one predator where the players will waddle around rocks until they reach the ocean. The ocean is a larger area where they are allowed to “swim” (run) with little to no obstacles but more predators.
3. As the game progresses the fish population can be depleted through human fishing. Make a big show of it so the players know what’s happening to the fish.